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(54) USE OF PLATINUM/ALUMINA-NITROGEN OXIDE TRAP FOR REDUCING AUTOMOBILE EXHAUST PRODUCT

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(57) Abstract:

PROBLEM TO BE SOLVED: To provide an ideal NO_x trap material cheaper than a NO_x trap material such as Pt-BaO/alumina catalyst and durable.

SOLUTION: The exhaust gas generated from an internal combustion engine is treated by periodically changing a ratio of air to fuel in the exhaust gas entering the trap between a lean operation and a rich operation so that the nitrogen oxide trap is installed in an exhaust passage, the nitrogen oxides are adsorbed during the lean operation and the nitrogen oxides are released during the rich operation. The trap consists of a porous carrier being substantially γ alumina, and 0.5-4 wt % Pt, based on the weight of the carrier, supported on the carrier. The released nitrogen oxides enable to be converted into N₂ and O₂ on novel metal by reduction substance such as hydrocarbon present in the exhaust gas.

